

CLAIMS

What is claimed is:

1. In a motor vehicle of the type having a frame assembly, a set of wheels rotatably supported on said frame assembly and a power train operable to drive at least one of said set of wheels, the improvement comprising a fluid storage volume defined in an elongated rail portion of the frame assembly, said fluid storage volume being in fluid communication with said power train to provide an operational fluid thereto, said operational fluid being selected from the group consisting of a fuel, an oxidant and a cooling fluid.
2. The motor vehicle of claim 1 further comprising a fuel tank supported on said frame assembly and in fluid communication with said power train to provide a primary source of said fuel thereto such that said fluid storage volume is a reserve fuel tank.
3. The motor vehicle of claim 2 wherein said fluid storage volume is substantially less than said fuel tank by volume.
4. The motor vehicle of claim 1 wherein said operational fluid is compressed air.

5. The motor vehicle of claim 1 wherein said operational fluid is coolant.

6. The motor vehicle of claim 1 wherein said fluid storage volume has a first chamber and a second chamber, said first chamber in fluid communication with said power train to provide a first operational fluid thereto.

7. The motor vehicle of claim 6 wherein said second chamber is in fluid communication with said power train to provide a second operational fluid different from said first operational fluid.

8. The motor vehicle of claim 6 wherein said second chamber is a vacant chamber.

9. The motor vehicle of claim 1 wherein said fluid storage volume has a liner formed therein to seal said fluid storage volume.

10. The motor vehicle of claim 1 wherein said fluid storage volume is filled with a hydrogen storage media.

11. The motor vehicle of claim 1 where said at least one elongated rail portion comprises a longitudinal frame rail.

12. The motor vehicle of claim 1 where said at least one elongated rail portion comprises a cross frame rail.

13. The motor vehicle of claim 1 wherein said frame assembly comprises a plurality of elongated rail portions, said fluid storage volume being defined within at least two of said plurality of elongated rail portions.

14. A motor vehicle comprising:

a frame assembly including at least one elongated rail;

a power train supported on said frame assembly, said power train including a fuel cell operable to convert a hydrogen-containing fuel and an oxidant into electrical energy and a motor electrically connected to said fuel cell to convert said electrical energy into rotary movement of a shaft;

a radiator supported on said frame assembly, said radiator in fluid communication with said power train such that a cooling fluid circulates therethrough;

a set of wheels rotatably supported on said frame assembly, at least one of said set of wheels operably coupled to said shaft for driving said at least one of said set of wheels;

a fuel tank supported on said frame assembly and in fluid communication with said fuel cell to provide a primary source of said hydrogen-containing fuel thereto;

a fluid storage volume defined within said at least one elongated rail and in fluid communication with said power train to provide an operational fluid thereto, said operational fluid being selected from the group consisting of said hydrogen-containing fuel, said oxidant and said cooling fluid.

15. The motor vehicle of claim 14 wherein said operational fluid is said hydrogen-containing fuel.

16. The motor vehicle of claim 15 wherein said fluid storage volume substantially less than said fuel tank by volume.

17. The motor vehicle of claim 14 wherein said operational fluid is compressed air.

18. The motor vehicle of claim 14 wherein said operational fluid is coolant.

19. The motor vehicle of claim 14 wherein said fluid storage volume has a first chamber and a second chamber, said first chamber in fluid communication with said power train to provide a first operational fluid thereto.

20. The motor vehicle of claim 19 wherein said second chamber is in fluid communication with said power train to provide a second operational fluid different from said first operational fluid.

21. The motor vehicle of claim 19 wherein said second chamber is a vacant chamber.

22. The motor vehicle of claim 14 wherein said fluid storage volume has a liner formed therein for sealing said fluid storage volume.

23. The motor vehicle of claim 14 wherein said fluid storage volume is filled with a storage media.

24. The motor vehicle of claim 14 where said at least one elongated rail portion comprises a longitudinal frame rail.

25. The motor vehicle of claim 14 where said at least one elongated rail portion comprises a cross frame rail.

26. The motor vehicle of claim 14 wherein said frame assembly comprises a plurality of elongated rail portions, said fluid storage volume being defined within at least two of said plurality of elongated rail portions.